Society of Automotive Engineers Convention: Auto industry tests 'black boxes' for car-truck troubleshooting

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By Anita Lienert

When an airplane crashes, there's always a rush to find the "black box" that records mechanical information and may hold the clue to why a disaster happened. Soon car owners may have the equivalent of a black box in their vehicles.

But don't worry. It's not the automotive equivalent of Big Brother. So far, it doesn't monitor your conversations, eating habits while driving, or taste in music.

The automotive black box or "vehicle data recorder" costs $2,500 and is slowly making its way into fleet vehicles and could be used eventually in consumers vehicles as the price drops, says Gary Wagner, vice-president of Electronic Concepts & Engineering Inc., a Toledo, Ohio, automotive supplier.

Wagner discussed his company's new device this week at the Society of Automotive Engineers conference.

Currently, Ford Motor Co. is using the vehicle data recorder to do troubleshooting on a handful of new models of the Explorer, Taurus, F-150 and Crown Victoria that are used in fleets.

The vehicle data recorder, which is about the size of a box of tissue, is mounted in either the engine compartment or the glove box. It could be used on any newer vehicle that is equipped with a federally mandated onboard diagnostic system.

Unlike an airplane black box, its chief function is not to record accidents, but to help mechanics diagnose problems.

"It doesn't record the conversation of people in the car," said Matt Olrich, who worked on the engineering of the recorder for the Toledo company. "But it can determine how the car is being abused. It collects data on how the typical driver brakes and how fast they accelerate. It monitors things like oil pressure, engine speed and what gear you're in. What it basically does is enable you to have a longer-lasting, better-maintained vehicle.

"It is also possible to program the vehicle data recorder to note the sequence of events in an accident, such as when an air bag explodes."

The boxes can also help mechanics unravel those mysterious problems that always seem to disappear when their cars get to the shop.

"The complexity of vehicle systems makes reliable detection and diagnosis of intermittent faults a critical necessity," Wagner said.

The unit is programmable and can retain information continuously for up to 10 years. To retrieve information, a service technician hooks the black box up to a personal computer or modem to save the information to a disk.

"It's really going to help with intermittent problems that consumers have with their cars," said Olrich. "We can take their anecdotal information and document it with information provided by the vehicle data recorder."

And by the way, like a flight data recorder, it's also black.

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